



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

JUL 19 2000

400 Seventh Street, S.W.  
Washington, D.C. 20590

DOT-E 11172  
(THIRD REVISION)

EXPIRATION DATE: June 30, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109.)

1. GRANTEE: U. S. Department of Defense (DOD)  
Washington, DC
2. PURPOSE AND LIMITATIONS:
  - a. This exemption authorizes the use of a non-DOT specification container for the transportation in commerce of certain non-flammable gases. This exemption provides no relief from any regulation other than as specifically stated herein.
  - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.301(h), 173.302(a), and 175.3 in that the use of a non-DOT specification cylinder is authorized as prescribed herein.
5. BASIS: This exemption is based on DOD's application dated June 15, 2000, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description/proper shipping name	Hazard Class/Division	Identification Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Oxygen, compressed	2.2	UN1072	N/A

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7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification, steel, spherical container which conforms with Lockheed's drawing numbers 2650252, 2650438, and 5558824 on file with the Office of Exemptions and Approvals (OHMEA), and with DOT Specification 3A (§ 178.36) except as follows:

178.36(a) Type, size, and service pressure

(1) Welded sphere, with maximum water capacity of 500 cubic inches and maximum service pressure of 3,000 psig.

(2) Not applicable.

178.36(b) Steel

AISA 4130 sheet per MIL-S-18729.

178.36(d) Manufacture

Manufactured by forming sheet stock into hemispherical shapes which are joined together by a continuous circumferential weld, and with bosses welded onto either, or both, ends.

178.36(e) Welding

(1) Welding as performed in §178.36(d) of this exemption is authorized. Welding must be full-penetration with 100% radiographic inspection.

178.36(f) Wall thickness

Minimum wall thickness is 0.210 inches.

Wall stress calculations must be made per the exemption application on file with OHMEA.

178.36(j) Flattening test

Test sample must consist of a ring cut at 45 degrees to the circumferential weld; all other requirements apply.

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178.36(l) Acceptable results for physical and flattening tests--results as follows:

- (1) Minimum tensile strength must be not less than 160,000 psi, and
- (2) Flattening must be to 10 times the wall thickness, without cracking.

178.36(n) Rejected cylinders

Repair by welding is authorized, followed by a 100% radiographic inspection. Reheat treatment is authorized, subsequent thereto, acceptable spheres must pass all prescribed tests.

b. TESTING - Spheres authorized by this exemption must be reinspected and retested as specified in § 173.34 for a DOT-3A cylinder. The retest interval must be every three years.

c. MARKING - Spheres must be marked with "DOT-E 11172" in lieu of "DOT-3A", followed by the service pressure.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. New construction is not authorized.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, cargo aircraft only, and passenger-carrying aircraft.

10. MODAL REQUIREMENTS: A copy of this exemption must be carried aboard each aircraft used to transport packages covered by this exemption. The shipper must furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous

materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.)

In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued at Washington, D.C.



*for* Robert A. McGuire  
Acting Associate Administrator  
for Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.  
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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copies of exemptions may be obtained from the AAHMS, U.S.  
Department of Transportation, 400 7th Street, S. W., Washington,  
D. C. 20590-0001, Attention: Docket Section, 202-366-5046.

PO: KFW/AM